



CITY OF ROCKY MOUNT ADMINISTRATIVE POLICY

Policy: Drought Management Implementation Plan

Section 1. Purpose

The purpose of this policy is to identify the measures and restrictions to be implemented when voluntary and mandatory water conservation conditions are declared.

Section 2. Scope

The intent of this policy is to require all City of Rocky Mount Departments and the public to implement water conservation measures and operational strategies during periods when the City Manager has declared a Water Shortage Condition.

Section 3. Water Supply & Drought Advisory Committee

The City Manager shall maintain an advisory committee comprised of an Assistant City Manager, the Director of Water Resources, the Director of Engineering, the Assistant City Engineer representing Water Resources, and the Public Works Stormwater Manager for the purpose of advising the City Manager on water supply management and conservation strategies. Meetings shall be scheduled by the Director of Water Resources no less than monthly and as often as deemed necessary when the City Manager has considered a water shortage condition to be imminent or existing.

Section 4. Department of Water Resources Standard Operational Procedures

- A. Unless conditions dictate otherwise, whenever a water shortage condition is imminent, the Water Resources Department shall move the Sunset Water Plant into the lead role of operation with the Tar River Reservoir Plant as its peaking and backup facility. Water Plant Operators shall be assigned in teams of two at the Sunset Water Plant and Maintenance Staff shall be scheduled to provide 24 hour service.
- B. Notice will be served to the owner(s) of the Mill Dam that the Sunset Water Plant has been placed into the lead role and the water level should not fall below three (3) feet of the Mill Dam overflow point. Two levels of coordination may be requested:
 - 1. A request for periodic run times of the generator turbines to assure the water level does not fall to a point where the full production capacity of the Sunset Water Plant is compromised.
 - 2. A request to eliminate run times for the generator turbines to assure full control of the water levels and to allow a high level of aeration to the discharge downstream.

- C. The Director of Water Resources shall make every effort possible to assure the USGS Gauges in the Upper Tar River are accurately calibrated on at least a monthly basis.
- D. Implementation of the Tar River Reservoir Model and the City of Rocky Mount Reservoir Report shall be activated in order to provide as much information as possible to the Office of the City Manager.
- E. Generally during Voluntary Conservation periods where conditions are apparently deteriorating, equipment shall be mobilized and connected at the Old Mill Road Quarry location for supplemental river flow pumping.
- F. Upon the commencement of quarry pumping, the City is allowed to decrease the Tar River Reservoir Dam river release rate by the Quarry Pump rate into Maple Creek. Recovery of Quarry levels during any periodic rain event shall be deemed as a critical operation and considered a priority over supplemental pumping.
- G. The Technical Services Division shall employ a daily upstream and downstream regimen of sampling of the Tar River Regional WWTP when the average daily release of USGS 02082585 (Atlantic Avenue) falls below 50 cfs. Parameters for pH and dissolved oxygen shall be considered the minimum analysis.
- H. During low distribution flow periods, should bacterial analysis or the creation of nitrates due to biological breakdown of the chloramines become of concern, periodic "burns" of free chlorine may be employed to counteract the imbalance of water detention time. Periodic flushing of dead end lines may be necessary to ensure water quality. This procedure shall be at the combined recommendation of the Superintendents of Water Treatment and Technical Services.
- I. Water and Sewer Services shall aggressively repair leaks normally scheduled for next day repairs.
- J. The Town of Tarboro may be requested to supply portions of Edgecombe County's water distribution system that are normally supplied by the City of Rocky Mount. This shall be done to lower production demands upon the City of Rocky Mount's treatment system. The County of Edgecombe shall be held harmless by the City of Rocky Mount for any increase in rate structure.
- K. The City of Wilson may be requested to supply portions of Nash County's water distribution system that are normally supplied by the City of Rocky Mount. This shall be done to lower production demands upon the City of Rocky Mount's treatment system. The County of Nash shall be held harmless by the City of Rocky Mount for any increase in rate structure.
- L. The City of Wilson may be requested to provide additional water supply to the City of Rocky Mount through a water purchase agreement and the provisions which hereafter follow:
 - 1. The emergency water supply line to Wilson through Sharpsburg, Wilson County, and Elm City at an estimated flow rate of 1.50 MGD. No Inter Basin Transfer shall be required for this supplemental water supply alone.
 - 2. The emergency water supply line to Wilson through Silver Lake, NC-97, and NC-58 at an estimated flow rate of 2.0 MGD. No Inter Basin Transfer shall be required for this supplemental water supply alone.

3. Activation of both water supply lines as a supply from the City of Wilson to the City of Rocky Mount and/or portions of Nash County within the Tar Pamlico River Basin in a quantity exceeding 2.0 MGD will require an emergency Inter Basin Transfer Permit from the NC DWQ.
- M. At times when the City of Rocky Mount is receiving a supplemental water supply from another water treatment source, consideration must be given to matching the disinfection properties of the receiving stream.
- N. The City of Rocky Mount may also provide, if requested, an emergency water supply to the City of Wilson through the supply line denoted in Section 4(L-2) at a flow rate of 2.0 MGD.
- O. The Director of Water Resources shall convey all Water Conservation Declarations of the City Manager to the Resale Customers of the Water System and require implementation of their Drought Management Plan relative to the level of declaration.
- P. The operation of the Tar River Regional Wastewater Treatment Facility is a critical component to Drought Management and every possible measure to assure a high quality effluent should be employed. The release of water from the Tar River Reservoir is directly related to the Wastewater Facility's 7Q10 assimilation ability. Currently documented to be sixty (60) cfs, it is defined to be the lowest stream flow average of seven consecutive days which would occur every ten years.

The Director of Water Resources shall keep the NC Drought Advisory Council informed of the City's actions with regard to supply and demand at least daily when a water shortage condition is in effect. There is no information more important than the volume of effluent flow, the analytical data of NPDES Permit discharge parameters, and the stream data obtained from Section 4(G).

Section 5. Consideration of Conservation Triggers

- A. An Outlook Alert shall be defined as a long range forecast view of pending hydrological conditions based upon historical data. An Outlook Alert shall be invoked by the City Manager's Office when advised by the Water Supply & Drought Advisory Committee that the Tar River Reservoir Model indicates there exists a 2½% probability the Tar River Reservoir levels could fall below an elevation of 112' MSL within the next twenty (20) weeks.
- B. Voluntary Conservation measures may be declared when the City Manager determines a Water Shortage Condition may be imminent. This may be in consideration of one or more the following:
 1. The Tar River Reservoir Model indicates the likelihood is 10% or greater the reservoir level will fall below 115.00' MSL within ten (10) weeks, and the elevation at the time of the model run is 124 feet MSL or lower.
 2. The Outlook Alert has been invoked.
 3. Supplemental reserves (i.e. quarry levels) being in partial fill state.
 4. The NC Drought Council issuance of a pending drought condition.
 5. Other conditions which the City Manager may deem to be critical.

- C. Mandatory I Conservation measures may be declared when the City Manager determines an advanced Drought Condition is evident. This may be in consideration of one or more the following:
 - 1. The Tar River Reservoir Model indicates that the likelihood is 20% or more the reservoir level will fall below 115.00' MSL within eight (8) weeks, and the elevation at the time of the model run is 124 feet MSL or lower for a period of fourteen (14) consecutive days.
 - 2. The Outlook Alert has been invoked.
 - 3. The City of Rocky Mount Water Supply & Drought Advisory Committee's hydraulic calculations support the integrity of the Mandatory I Conservation trigger having been met.
 - 4. The NC Drought Council issuance of an existing drought condition.
 - 5. Other conditions which the City Manager may deem to be critical.
- D. Mandatory II Conservation measures may be declared when the City Manager determines an extraordinary Drought Condition is evident. This may be in consideration of one or more the following:
 - 1. The Tar River Reservoir Model indicates the likelihood is 20% or more the reservoir level will fall below 115.00' MSL within four (4) weeks, and the elevation at the time of the model run is 120 feet MSL or lower for a period of seven (7) consecutive days.
 - 2. The Outlook Alert has been invoked and/or Mandatory I Conservation measures have been invoked.
 - 3. The City of Rocky Mount Water Supply & Drought Advisory Committee's hydraulic calculations support the integrity of the Mandatory II Conservation trigger having been met.
 - 4. The NC Drought Council issuance of an existing drought condition.
 - 5. Other conditions which the City Manager may deem to be critical.
- E. Mandatory III Conservation measures may be declared when the City Manager determines measures beyond Mandatory II Conservation are necessary.
- F. Mandatory IV Conservation measures may be declared when the City Manager determines measures beyond Mandatory III Conservation are necessary.

Section 6. Voluntary Water Conservation Measures

Whenever the City Manager declares a water shortage condition to be in effect and issues a water shortage advisory notice which implements the need for Voluntary Water Conservation Measures to be employed, the following measures shall be considered in the declaration:

- A. The Parks and Recreation Department shall reduce the operational times for general use of the Spray Grounds by half (if open time is normally eight hours, for example, it will be reduced to four hours). The Parks and Recreation Department shall discontinue accepting reservations for the morning hours and will cancel reservations more than one week old.
- B. The Water Resources Department shall discontinue the hydrant flushing program except for dead end mains and fire flow testing where there is a specific need.

- C. The Parks and Recreation Department will reduce irrigation frequency in the parks and at other City owned property to twice each week in accordance with the provisions of the water conservation ordinance.
- D. The Transit Division shall reduce exterior bus washing frequency to "as needed" which shall be less frequently than daily.
- E. The Engineering Department shall freeze the release of water meters for use as irrigation meters. Property owners may install irrigation systems but irrigation meters shall not be issued.
- F. All Departments shall reduce the frequency of vehicle washing.
- G. Release rates from the Tar River Reservoir as measured at USGS Station 02082506 (Lamon's Ferry) and/or 02082585 (Atlantic Avenue) shall be reduced from 80 to 70 cfs.

Section 7. Mandatory I Water Conservation Measures

Whenever the City Manager declares a water shortage condition to be in effect and issues a Mandatory I water shortage condition notice, the following measures shall be considered in the declaration in addition to those associated with Voluntary Water Conservation:

- A. The City of Rocky Mount Customer Base shall limit irrigation of lawns, shrubbery, and gardens to two events per week from 6:00 PM to 9:00 PM employing the use of handheld device, container, or a drip irrigation system. The schedule shall be as follows:
 - Users located East of Wesleyan Blvd (US-301 Bypass) may irrigate on Wednesdays and Saturdays.
 - Users located West of Wesleyan Blvd (US-301 Bypass) may irrigate on Thursdays and Sundays.
 - The City Manager, at his discretion, may authorize twice a week watering with automated irrigation systems, if conditions permit.
- B. Governmental and educational entities that have athletic fields for the purpose of sanctioned competition events may be allowed to water in accordance with the provisions of Section 7(a) using their automated irrigation systems.
- C. Water Customers who employ private irrigation wells shall be encouraged to water in accordance with the provisions of Section 7(A).
- D. Commercial car washes shall reduce consumption by at least 10% based upon a monthly consumption in comparison to the previous non drought year. The penalty for non attainment is doubling the water rate for this period that Mandatory I restrictions are in force. Commercial car wash locations may be allowed to employ metered private wells as their non potable water source, if available. The application of private wells shall be coordinated through written notice to the Director of Water Resources and shall comply with all applicable provisions of Administrative Policy IX.3 Backflow Prevention and Cross Connection Control.
- E. The washing of vehicles at locations other than commercial car washes is prohibited.
- F. Commercial vehicle sales locations shall limit their washing of vehicles to a level of receipt and final sales and leasing only. No rinsing or interim exterior cleaning shall be allowed.

- G. Restaurant establishments shall provide water with meals served only when the customer makes the request.
- H. Property owners who installed a grass sod less than thirty (30) days prior to the declaration of Mandatory I Water Conservation shall be allowed thirty days from placement to maintain their investment through irrigation. A permit must be obtained from the Director of Water Resources to allow this time frame of special irrigation.
- I. Owners of Plant Nurseries and/or Retail Establishments for the sale of plants may continue irrigation as needed to sustain its business; however, the focus upon drought tolerant inventory shall be recommended.
- J. City water customers, excluding customers who purchase water at a wholesale rate and excluding Nash General Hospital and private medical offices and clinics for public health reasons, whose average daily demand based upon the usage during the corresponding billing period of the most recent twelve (12) month period ending June 30, in which no water use restriction pursuant to this ordinance was in effect, exhibited a usage equal to or exceeding 10,000 gallons per day shall submit a 10% and 30% Conservation Reduction Plan to the Director of Water Resources in consideration of the possible implementation of Mandatory II and Mandatory III Conservation.
- K. Residents and property owners of the Tar River Reservoir who have irrigation water supply intake connections to the lake shall be allowed the same schedule and irrigation methodology as Section 7(A), unless a conveyance or deed agreement states otherwise.
- L. The Parks and Recreation Department shall discontinue Spray Ground operations entirely.
- M. The Parks and Recreation Department shall turn off the water supply to the distribution system within the City owned cemeteries.
- N. The Public Works Department shall suspend all street sweeping operations unless otherwise authorized by the Office of the City Manager.
- O. The Water Resources Department shall call in all hydrant meters that have been distributed and shall suspend the issuance of new hydrant meters.
- P. The Parks and Recreation Department shall be subject to the provisions of Section 7(A) and 7(B) as it applies to irrigation at parks and other City owned property.
- Q. Departments may wash vehicles at commercial car washes which have been documented by the Director of Water Resources to have met or exceeded the provisions of Section 7(D), but on a reduced frequency.
- R. Vehicles may be washed using the Reclaimed Waters of the Tar River Regional WWTP at the Sludge Loading Station, provided a schedule is made through the Superintendent of the Facility.
- S. Water necessary for the filling and testing of new water mains shall be approved and coordinated through the Director of Engineering.
- T. The Director of Engineering will cease the review and issuance of all irrigation and any new non potable well drilling permits within the City of Rocky Mount's authority unless otherwise instructed by the City Manager.
- U. The filling of new fountains or re-filling of existing fountains that have been drained is prohibited
- V. The filling of new pools or re-filling of existing pools that have been drained is prohibited.

- W. Release rates from the Tar River Reservoir as measured at USGS Station 02082506 (Lamon's Ferry) and/or 02082585 (Atlantic Avenue) shall be reduced from 70 to 60 cfs.

Section 8. Mandatory II Water Conservation Measures

Whenever the City Manager declares a water shortage condition to be in effect and issues a Mandatory II water shortage condition notice, the following measures shall be considered in the declaration in addition to the provisions of Mandatory I Water Conservation:

- A. The City of Rocky Mount Customer Base shall limit irrigation of lawns, shrubbery, and gardens to one event per week from 5:00 PM to 8:00 PM employing the use of handheld device means only. The schedule shall be as follows:
 - Users located East of Wesleyan Blvd (US-301 Bypass) may irrigate on Saturdays.
 - Users located West of Wesleyan Blvd (US-301 Bypass) may irrigate on Sundays.
- B. Governmental and educational entities that have athletic fields for the purpose of sanctioned competition events shall be allowed to water in accordance with the provisions of Section 8(A); however, they shall be allowed to use their automated irrigation systems.
- C. Water Customers who employ private irrigation wells shall be encouraged to water in accordance with the provisions of Section 8(A).
- D. Residents and property owners of the Tar River Reservoir who have water supply intake connections to the lake shall be allowed the same schedule and irrigation methodology as 8(A), unless a conveyance or deed agreement states otherwise.
- E. Commercial car washes shall reduce consumption by at least 25% based upon a monthly consumption in comparison to the previous non drought year. The penalty for non attainment is doubling the water rate for the period that Mandatory II water restrictions are in force.
- F. The Customer Base who submitted a ten percent (10%) Conservation Reduction Plan as provided in Section 7(D) shall be required to implement the plan.
- G. Initial filling, draining, and refilling of swimming or wading pools is prohibited. The makeup waters needed for normal operation of the installation shall be allowed.
- H. Operation of exterior fountains is prohibited.
- I. Pressure washing shall be allowed only for the abatement of unsanitary conditions or processes critical to building constructions. Examples of construction related applications would be an exterior wall scour prior to repainting or the final cleaning of brick masonry. An application approval shall be requested from the Director of Water Resources prior to the commencement of work.
- J. Release rates from the Tar River Reservoir as measured at USGS Station 02082506 (Lamon's Ferry) and/or 02082585 (Atlantic Avenue) shall be reduced to a minimum level approved by the State of North Carolina; however, a release rate equal to 200% of the average daily flow of USGS Station 02081747 (Louisburg, NC) shall be requested.

Section 9. Mandatory III Water Conservation Measures

Whenever the City Manager declares a water shortage condition to be in effect and issues a Mandatory III water shortage condition notice, the following measures shall be considered in the declaration in addition to the provisions of Mandatory II Water Conservation:

- A. Commercial car washes shall reduce consumption by 33% based upon a monthly consumption in comparison to the previous non drought year. The penalty for non attainment is doubling the water rate for the period that Mandatory III water restrictions are in force.
- B. Watering lawns, grasses, shrubbery, trees, flowers, vegetable gardens, or any other outside surfaces by any means shall be prohibited. Plant nursery establishments shall reduce their water usage to a level of sustaining inventory plants only.
- C. Water Customers who employ private irrigation wells shall be encouraged to suspend all outside watering.
- D. Operating swimming or wading pool is prohibited.
- E. Testing or flushing of any water or sewer lines, unless necessary to ensure public health and safety, shall be banned.
- F. All non-residential customers who use ten-thousand (10,000) gallons or more of water per day who submitted water use reduction plans shall implement their thirty percent (30%) reduction plans and submit a fifty percent (50%) reduction plan in consideration of the possible implementation of Mandatory Stage IV.
- G. All non-residential customers, excluding customers who purchase water at a wholesale rate and excluding Nash General Hospital and private medical offices and clinics for public health reasons, who use between five-thousand (5,000) and ten-thousand (10,000) gallons of water per day shall submit plans to the Director of Water Resources demonstrating the ability to reduce water consumption by ten percent (10%) and thirty percent (30%) per day. The list of customers for these groups shall be based on the average usage during the corresponding billing period of the most recent twelve (12) month period ending June 30, in which no water use restriction pursuant to this ordinance was in effect. Upon approval of plans, and as directed by the city manager, these customers shall reduce water consumption by ten percent (10%).
- H. Customers operating water-cooled chillers for air conditioning and other purposes shall be seriously encouraged to restrict use to during operating hours only, or as necessary to ensure public health and safety.
- I. Restaurants and other eating establishments and facilities, including schools and hospitals, shall be encouraged to use disposable utensils, dishes, and serving ware.
- J. All customers shall be advised to restrict their water usage to the minimum amounts necessary and implement temporary measures as necessary to conserve above and beyond existing measures.
- K. Release rates from the Tar River Reservoir as measured at USGS Station 02082506 (Lamon's Ferry) and/or 02082585 (Atlantic Avenue) shall be reduced to a minimum level approved by the State of North Carolina; however, a release rate equal to 150% of the average daily flow of USGS Station 02081747 (Louisburg, NC) shall be requested.

Section 10. Mandatory IV Water Conservation Measures

Whenever the City Manager declares a water shortage condition to be in effect and issues a Mandatory III water shortage condition notice, the following measures shall be considered in the declaration in addition to the provisions of Mandatory III Water Conservation:

- A. Using water for any outside purpose, except as necessary to ensure public health and safety shall be banned.
- B. Operating any commercial car wash facility, or washing any cars, trucks, or other motorized equipment, by vehicle and automobile dealers, repair shops, rental agencies, or any other person shall be banned.
- C. Restaurants and other eating establishments and facilities, including schools and hospitals, shall be required to use disposable utensils, dishes, and serving ware.
- D. All customers shall be advised to restrict their water usage to the minimum amounts necessary to handle the critical functions of food preparation, drinking, and hygiene, and shall implement temporary measures as necessary to conserve above and beyond existing measures.
- E. All non-residential customers who submitted water use reduction plans or were required to submit water use reduction plans shall implement reductions up to the following amounts (as determined by the City Manager), depending on their average daily usage:
 - 1. For those customers who consume between five-thousand (5,000) and ten-thousand (10,000) gallons per day, reductions shall be up to thirty percent (30%).
 - 2. For those customers who consume ten-thousand (10,000) or more gallons per day, reductions shall be up to fifty percent (50%).
- F. The City Manager shall have the authority to utilize all necessary and available resources, including those of the city, counties, state, and federal governments, to locate and distribute water for household use at prearranged locations within affected areas of water shortage.
- G. Release rates from the Tar River Reservoir as measured at USGS Station 02082506 (Lamon's Ferry) and/or 02082585 (Atlantic Avenue) shall be reduced to a minimum level approved by the State of North Carolina; however, a release rate equal to the average daily flow of USGS Station 02081747 (Louisburg, NC) shall be requested.

Section 11. Fines Associated with a Mandatory Water Conservation Measures

A. Any person, firm, or corporation who violates any provision of this article shall be subject to the following civil penalties for violations under Stages I and II, and double said amounts under Stages III and IV:

1. *Residential violations:*

- i. First violation - Warning notice;
- ii. Second violation - \$100.00 civil penalty;
- iii. Third violation - \$250.00 civil penalty;
- iv. Fourth violation - Termination of service until such time as the violator established to the reasonable satisfaction of the City Manager that such customer has taken appropriate steps to prevent any further violations; and
- v. Fifth violation - Termination of service until the end of the water shortage condition.

2. *Non-residential violations:*

- i. First violation - Warning notice;
- ii. Second violation - \$250.00 civil penalty;
- iii. Third violation - \$500.00 civil penalty;
- iv. Fourth violation - Termination of service until such time as the violator establishes to the reasonable satisfaction of the City Manager that such customer has taken appropriate steps to prevent any further violations of this article; and
- v. Fifth violation - Termination of service until the end of the water shortage condition.

3. *High volume water users required to operate under a ten percent (10%) or more per day reduction plan - violations:*

- i. First violation - Warning notice;
- ii. Second violation - \$1,000.00 civil penalty; and
- iii. Third and subsequent violations - \$5,000.00 civil penalty.

Attachments: Contracts between the City of Rocky Mount, Town of Tarboro, Edgecombe County, City of Wilson, Wilson County, Town of Sharpsburg, and Elm City associated with Drought Management Plans.